

## Working Parameters and Specifications

Factory temperature setting:	41°C
Outlet temperature setting range:	35-50°C
Temperature, Hot supply:	55-65°C
Temperature, Cold supply:	Equal to or less than 25°C
Minimum hot to mix differential temperature:	10°C
Temperature stability:	± 2°C
Maximum pressure, static:	10 bar
Working pressure, HP:	0.5 - 5 bar
Working pressure, LP:	0.1 - 1 bar
Flow rate, minimum:	4 lpm
Flow rate @ 1bar:	55 lpm
Flow rate @ 2bar:	75 lpm

Please note: Valves approved for designation of LP bath applications that only achieve the minimum flowrate requirement at a supply pressure of 0.2 bar must indicate that the minimum supply pressure for LP bath application is 0.2 bar.

## Spares

SKIT115001 - Full internal service kit  
Includes: Piston, Thermostatic Element, Spring and all the necessary o-ring seals.

## Approvals & Standards

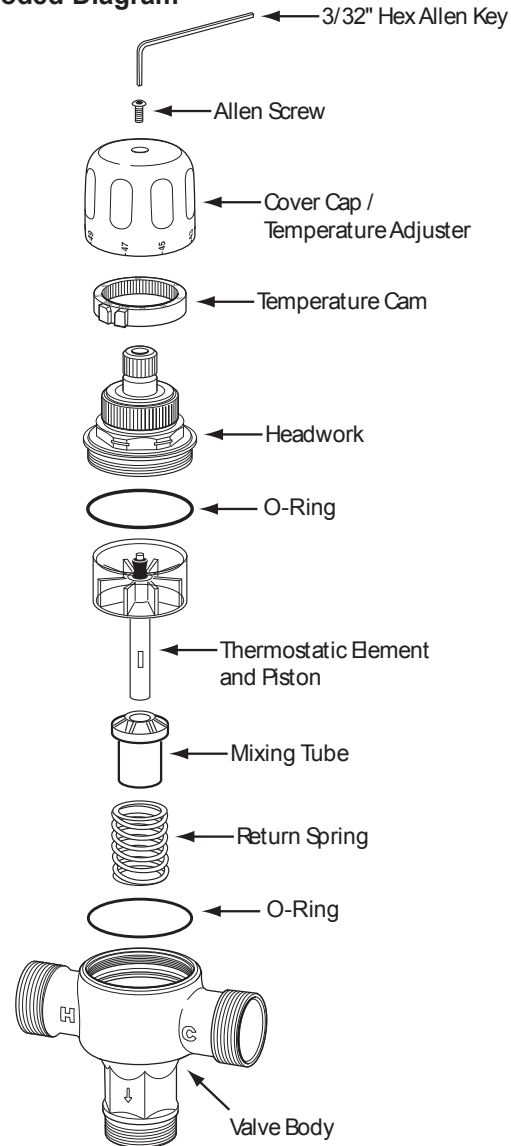
WRAS Approved  
TMV2 Approved  
BS EN 1287 - LP  
BS EN 1111 - HP

## Recommended Outlet Temperatures

Basins:	41°C
Showers:	41°C
Bath:	44°C
Bidet:	38°C

Please note:  
The mixed water temperature must never exceed 46°C. This is the maximum water temperature from the bath, it takes into account the allowable temperature tolerances inherent in thermostatic mixing valves and temperature losses in metal baths. It is not a safe bathing temperature for adults or children. The British Burns Association recommends 37°C as a comfortable bathing temperature for children. In premises covered by the Care Standards Act 2000, the maximum mixed water outlet temperature is 43°C.

## Exploded Diagram



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## Installation and Maintenance Instructions



## Heatguard BF2-2 Thermostatic Mixing Valve



A high quality, high flow and high temperature thermostatic mixing valve designed specifically for bath fill applications.

## Reliance Worldwide Corporation (UK) Ltd

Reliance Worldwide Corporation (UK) Ltd are part of the Australian based group of companies collectively known as Reliance Worldwide Corporation, with the UK brand known as Reliance Water Controls.

Reliance Worldwide Corporation (UK) Ltd is a specialist in the design, distribution and technical support for temperature and flow controls.

With group offices and manufacturing plants throughout the world RWC offers a wealth of knowledge and expertise which is reflected throughout our products. Being part of many specialised trade associations and having our own UKAS accredited laboratory, makes us at the forefront of any new regulations or changes which impact the industry, and allows for continuous product development and innovation, within our specialised product area.

## Installation

Before installing the Heatguard BF2-2 valve ensure that the designation of the valve matches the application. Flow rates, dynamic pressures, and temperatures must be within the limits stated, as valves operating outside these conditions of use, cannot be guaranteed to operate correctly as a Type 2 valve. The valve must be installed in accordance with current regulations, specific to the application and valve and in accordance with water supply (water fitting) regulations 1999. Isolation valves must be fitted adjacent to the hot & cold water inlet supplies to the Heatguard BF2-2 valve. The Heatguard BF2-2 valve includes integral check valves and strainers, it can be installed in any orientation provided that the hot and cold supplies are connected to the appropriate indicated inlets. The valve should not be installed until the system has been flushed free of all debris, and in a position in which maintenance and commissioning of the valve can be undertaken.

The Heatguard BF2-2 thermostatic mixing valve contains temperature sensitive components. Soldering near the valve body must be avoided.

## Commissioning

Please ensure that the commissioning of the valve is done under normal operating conditions. The Heatguard BF2-2 thermostatic mixing valve is supplied factory set at 41°C. To alter this setting proceed as follows:

1. Remove the screw which secures the cap by using the allen key provided then lift the cap off.
2. With both the hot and cold supplies turned fully on and

the terminal fitting open, adjust the temperature to the required setting, by using the cap to turn the adjustment spindle.

3. Turn the cap clockwise to decrease or anti-clockwise to increase the temperature.

4. A digital hand-held thermometer should be used to measure the outlet temperature correctly.

5. Once the correct temperature has been set refit the cap, ensuring it is secured through the slots on the locking ring so that the valve cannot be adjusted by the end user.

6. Once the correct outlet temperature has been achieved the valve's internal mechanism should be exercised at least 3 times by alternately isolating the hot and cold supplies. This will cause the piston to travel its full stroke and will ensure that the valve is operating correctly. If the set temperature has drifted after this operation then the commissioning operation should be repeated.

7. Once the valve has been commissioned a cold water supply shut off test should be performed.

- a. Isolate the cold supply, the flow should reduce to a trickle within a second or two depending on site conditions.
- b. Restore the cold supply and check that the set temperature has not altered.
- c. Repeat the test for the hot supply.

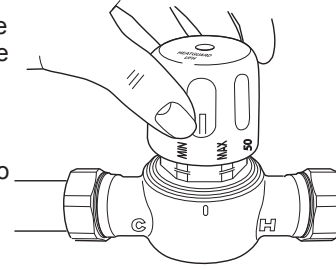
8. If either test does not show correct performance, ensure that supply pressures and temperatures are within the valve's normal operating parameters. In addition, check that the hot supply temperature is at least 10°C above the valve's set mixed outlet temperature i.e. hot to mix differential temperature.

If this is not the case then the valve will be slow to shut down on cold water failure.

9. For optimum performance it is recommended that the dynamic pressures be as close to equal as possible. If the dynamic pressures are outside a 10:1 ratio then a pressure reducing valve should be fitted to the higher supply pressure or if preferred, the lower supply pressure boosted.

10. A record of the commissioning settings should be made for comparison with future performance checks.

Please note: If there is a residual flow, then this is acceptable providing the temperature of the seeping water is no more than 2°C above the designated maximum water outlet temperature setting of the valve.



## Maintenance

The performance of the Heatguard BF2-2 should be checked on an annual basis and verified against the original installation performance. If the water or installation conditions are more severe this check should be carried out more frequently.

## Performance check

Performance checks that should be carried out at routine maintenance times are:

1. Check the set temperature using a hand-held digital thermometer.
2. Carry out the cold and hot water supply isolation tests.
3. If there is no significant change to the set outlet temperature (2°C or less change from the original settings) and the fail-safe shut off is functioning, then the valve is working correctly and no further service work is required.

## Cleaning the valve

1. Isolate the hot and cold supplies and remove the valve from the installation. Make note of the orientation of the parts as they are removed so that they can be reassembled in the correct manner.

2. Remove the strainers fitted in the hot and cold water inlets and check for damage, rinse in clean potable water.

3. To clean the internals of the main valve body, first remove the cap using an allen key, then remove the plastic locking ring, then finally carefully remove the valve headwork by unscrewing the large hex nut.

4. Slide the piston and thermostat assembly out of the valve body and clean all internal surfaces and o-rings with a weak solution of scale remover approved for use with potable water.

5. Using a WRAS approved silicone based waterproof grease, lightly lubricate the o-ring in the body and the external surface of the piston.

6. After cleaning, re-assemble the Heatguard BF2-2 valve. Exercise, reset and test the valve as laid out in the commissioning section.

